

Four Channel Multiplexed Digital Video Recorder




Owner's Manual

Customer Support 1-800-774-0284

15540 Herriman Blvd. Noblesville, IN 46060

Safety Precautions

	CAUTION RISK OF ELECTRICAL SHOCK. DO NOT OPEN !
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK), NO USER SERVICEABLE PARTS REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	



A lightning flash with an arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of insulated dangerous Voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock.



An exclamation point within an equilateral triangle is intended to alert the user of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE UNIT TO RAIN OR MOISTURE. THIS UNIT IS NOT DESIGNED FOR OUTDOOR USE.



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.



Power Disconnect. Units with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON-OFF switch is the ON position. The power cord is the main power disconnect for all units.

Warranty
and Service

There are no serviceable parts inside this unit, call the manufacturer for details.

About this document

Before installing the DVR, be sure to thoroughly review and follow the instructions in this User's Manual. Pay particular attention to the parts that are marked **NOTICE**.

Also, when connecting with an external device, first turn the power OFF and follow the manual's instructions for a proper installation.

Please read all instructions before setting up the DVR

1. This document is intended for both the administrator and users.
2. This manual contains information for configuring, managing and using your DVR.
3. To prevent fire or electrical shock, do not expose this product to heat or moisture.
4. For questions and technical assistance of this product, contact our technical support at 800-774-0284.

Strong recommendations on installation of the DVR:

1. Ensure that the electricity at the place you want to install the DVR is stable and meets electrical requirements.
2. Unit generates heat which must be properly discharged. Do not place objects beside exhaust port(fan) on the left and the right side of the unit..
3. Place your DVR unit in a well-ventilated area. Do not place heat-generating objects on top of the unit.

FCC Statement:

WARNING

This device complies with Part 15 of the FCC Rules. Operation is subject to the following

two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received including interference that may cause undesired operation.

*** Federal Communications Commission (FCC) Statement**

WARNING











This Equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

* You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FRONT PANEL



1.  / SET : Quad screen mode button / Set PTZ preset function
2. **CHANNEL 1** : Channel 1 full screen button
3. **CHANNEL 2** : Channel 2 full screen button
4. **CHANNEL 3** : Channel 3 full screen button
5. **CHANNEL 4** : Channel 4 full screen button
6. **LOCK** : Press this button to operate Key Lock function
7. **AUDIO/ CALL** : Audio on or off button / Call PTZ preset function
8. **AUTO** : Auto sequence mode
9. **BACKUP** : Image backup button
10. **UP / STOP** : Direction button UP / Playback stop button  / 
11. **DOWN / PAUSE** : Direction button down / Playback pause  /  (Step play)
12. **REW** : Reverse playback button / play speed /  
13. **FF** : Forward playback button / play speed /  
14. **ENTER** : Enter button or value change
15. **MENU BUTTON** : Press this button to display the menu setup
16. **ESC/ PTZ** : Press this button to exit menu / Call PTZ camera
17. **T-SRH/Focus/Zoom** : Press this button for playback time search/Toggle PTZ from F to Z
18. **PLAY BUTTON** : Press this button to playback
19. **+ BUTTON** : Increase + value
20. **REC BUTTON** : Press this button to start recording
21. **- BUTTON** : Reduce - value
22. **USB 2.0** : Thumb Drive slot 

*User should plug in USB again if ActiveX is loaded, image is backed up, or version is updated.

REAR PANEL



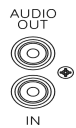
Power input in DC12V/5A, power switch (ON / OFF)



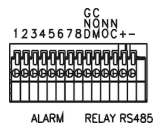
Camera 1 ~ 4 input BNC type



Monitor out



Audio channel input x 1 and output x 1



Alarm / Relay / RS 485 Terminals



RJ-45 (Network connector)

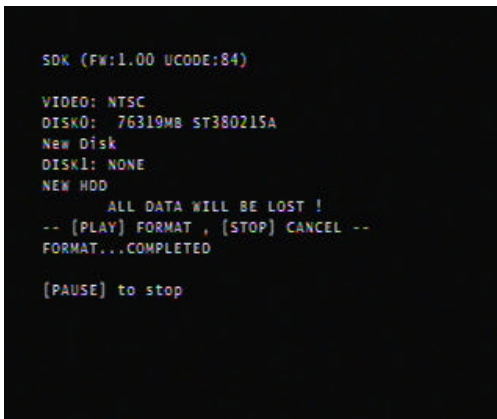
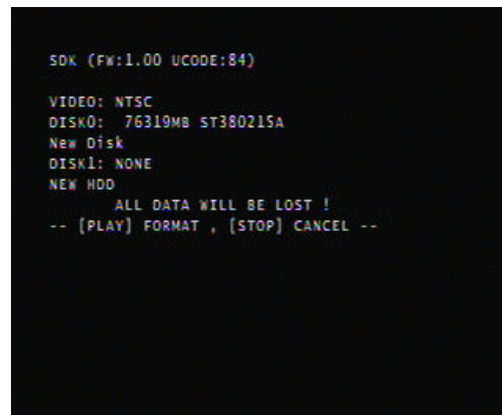


PS 2 type mouse connector

DVR Initializing



or detecting a new hard disk



Live screen



Recording icon



Overwrite



Motion



Alarm



Event (Motion / Alarm)

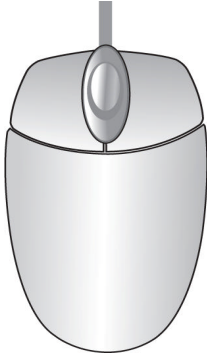


Video loss

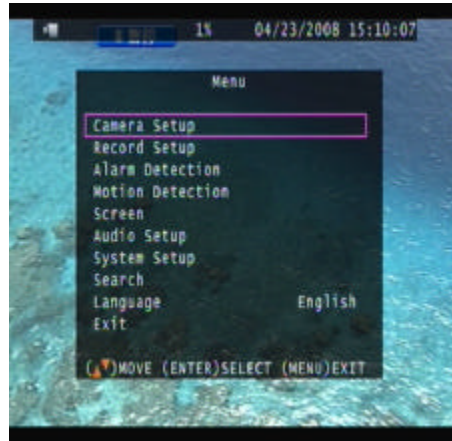


Keypad lock * 111111 is the default password

Mouse Control



1 Screen display	1. Double-click on the left button of desired camera to display full screen 2. Double-click on the left button of desired camera to view quad screen
3 Menu display	1. One-click right button to view menu OSD 2. Back to last OSD page
2 None	No function
1 Select	Selects Item to be viewed or changed



Operate:

- MENU BUTTON** : Press MENU button to enter menu setup or exit
- ESC BUTTON** : Press ESC button to exit menu
- ENTER BUTTON** : Press Enter button to confirm set or change value
- DIRECTION BUTTON** : MENU item select
- + BUTTON** : Increase + value
- BUTTON** : Reduce - value
- BACKUP** : To backup mode

(▲▼) MOVE (ENT) SELECT (MENU) EXIT

Remote control:

The keys on the remote control function the same as the front keypad of the unit.



Number : Channel select 1 ~ 4

Quad

Auto : Channel sequence

Audio : Audio on / off

Note: See what is on remote now

UP / STOP : Direction button UP / Playback stop button

REW : Reverse playback button

DOWN / PAUSE : Direction button down / Playback pause

FF : Forward playback button

ENTER : Enter button or value change

MENU BUTTON : Press this button to display the menu setup

BKUP : Image backup button

ESC : Press this button to exit menu

T-SRH : Press this button for playback time search

PLAY : Press this button to playback

REC BUTTON : Press this button to start recording

+ BUTTON : Increase + value

- BUTTON : Reduce - value

Main MENU – Camera Set

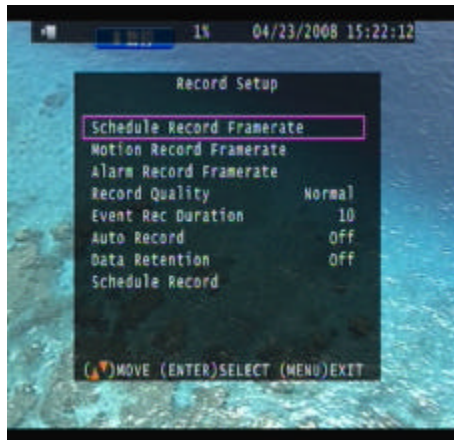


Main MENU – Camera Set – Title

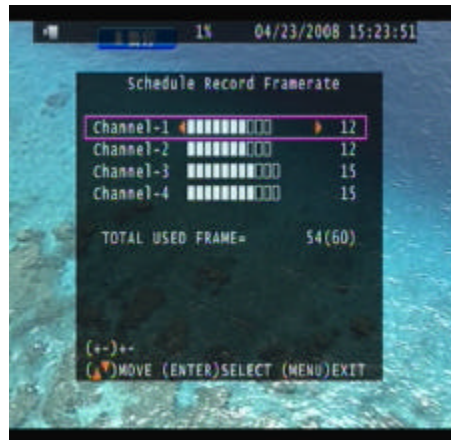
Camera title setup function allows 5 characters for each channel.



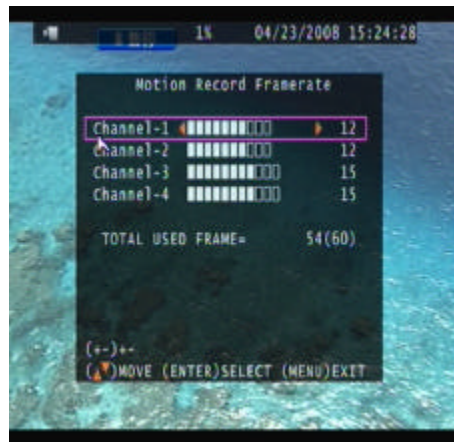
Main Menu – Record Setup



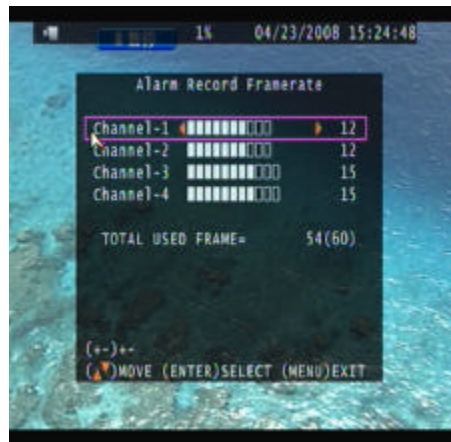
Record Setup – Schedule Record Frame rate



Record Set – Motion Record Frame rate



Record Set – Alarm Record Frame rate



Record Set – Record Quality: High / Normal / Low

Record Set – Event Rec Duration: 5 / 10 / 15 / 20 / 25 / 30

Record Set – Auto Record: After 1 ~ 8 minutes, auto start to record if no operation.

Record Set - Data Retention Set: 1 ~ 15 days

Record Set – Schedule Record



Note: Hours of the day are displayed in Military (24 Hour) time format. Example:

$\frac{0}{0}$ = Midnight to 1:00 am


$\frac{0}{2}$ = 2:00 am – 3:00 am

$\frac{0}{4}$ = 4:00 am – 5:00 am

$\frac{1}{6}$ = 4pm – 5:00 pm etc.

The empty spaces in between are the odd numbered hours of the day.

Notice:

1. You can adjust the frame rate of each channel and set different record modes, such as schedule, motion detection, and alarm record
2. Press  button to change to different record modes.

Schedule record mode



Motion record mode



Alarm record mode



Schedule, motion, and alarm record mode



Record Time Table: 250GB HD

Record Quality: Low. Average: 5 KB;

REC FPS	60	30	15	10
REC Hour	237.6	488.4	976.8	1465.2

Record Quality: Normal. Average 10 KB;

REC FPS	60	30	15	10
REC Hour	118.8	244.2	488.4	732.6

Record Quality: High. Average 20 KB;

REC FPS	60	30	15	10
REC Hour	59.4	122.1	244.2	366.3

This table is only for reference. Frame rate will vary slightly with the complexity of the images being recorded.

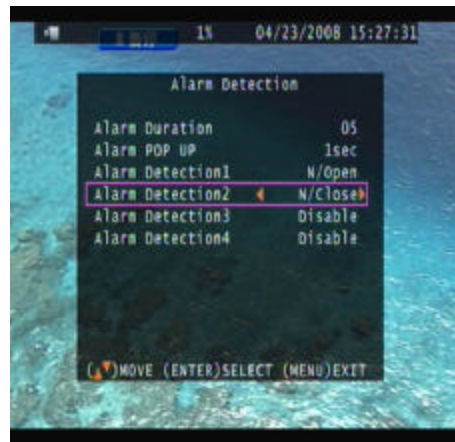
20 K x 30 (frame rate) x 60 (mins) x 60 (secs) = 2160000 K = 2160 M / hr

2160 M / hr x 24 = 51840000 K = 51840 M = 51.84 G / (1 Day)

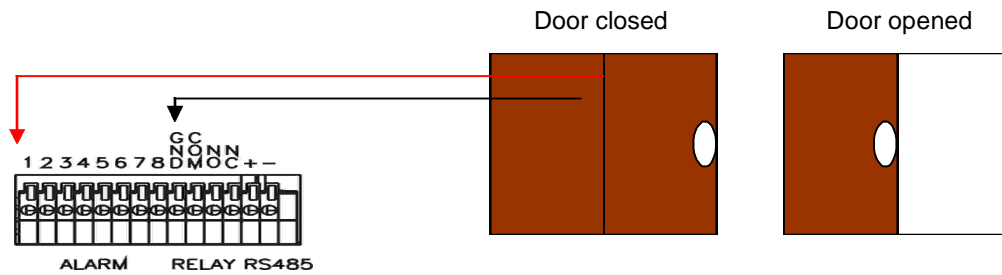
Hard disk compatible table

IDE	Seagate	Hitachi	WD(AAJB)	
Size	80 ~ 750 GB OK	80 ~ 750 GB OK	80 ~ 750 GB OK	

Main Menu – Alarm Detection

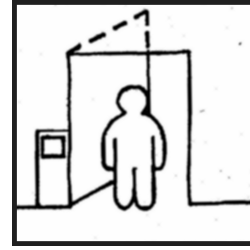
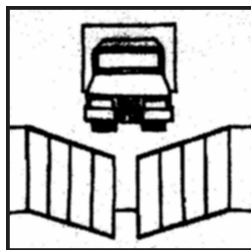
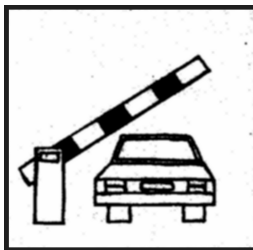


Alarm Signal type depends on Alarm Sensor polarity defined as NO (N/Open) or NC (N/Close) mode. Alarm POP UP: Event channel jumps to full screen when alarm is triggered. Quad screen with the alarm symbol will display if more than two cameras are triggered.

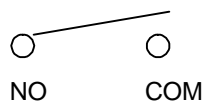


Relay Outputs: NO + COM or NC + COM

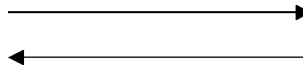
Possible Relay activations:



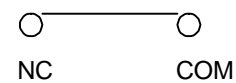
Relay: NO (Normal open)



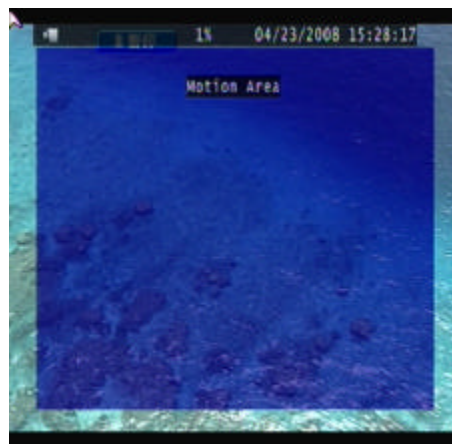
Alarm trigger



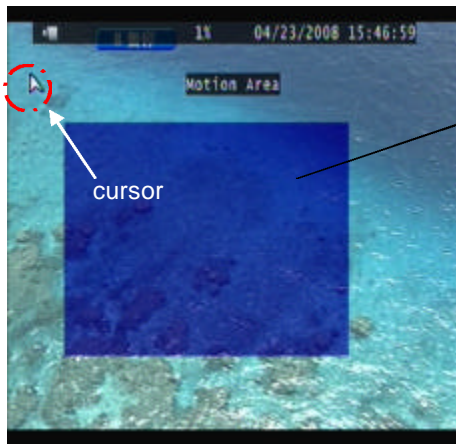
Relay: NC (Normal Close)



Main Menu – Motion Detection



Main Menu – Motion Detection – Motion Area



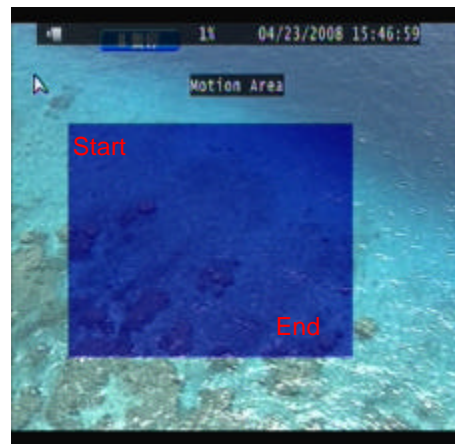
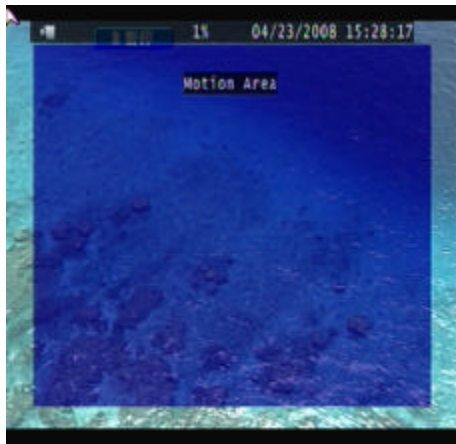
Detected area

Alarm POP UP: Alarm channel jumps to full screen when motion is triggered. Quad screen with the alarm symbol is displayed if more than two cameras are triggered.

Main Menu – Motion Detection – Motion area selection

Direction button Left or Right + ENTER to cancel detection area.

Select start (right-up corner) point and end (left-below corner) sets detection area.



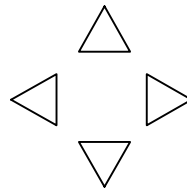
One-click of the mouse left button will cancel detected area.

Select start (right-up corner) point and end (left-below corner) sets detection area.

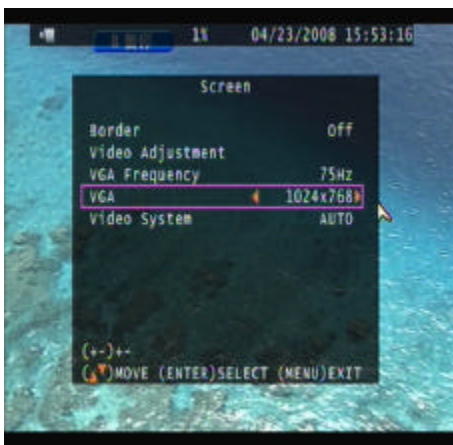
Main Menu – Screen – Border: Quad border On / Off display



Main Menu – Screen – Video Adjustment: Video screen position movement



Main Menu – Screen – VGA Frequency and VGA



After selecting, press ENTER to see the changed resolution. Press ENTER to change, press ESC to cancel. If no change is made, the mode will change back to the last status after 15 seconds.

DVR needs to reboot if 1280x1024 resolution is adjusted.

Main Menu – Audio Set



- To record audio, set to “on”. Adjust input/output levels for desired sound.

- Mute turns off live audio.

Main Menu – System Set – Hard Disk



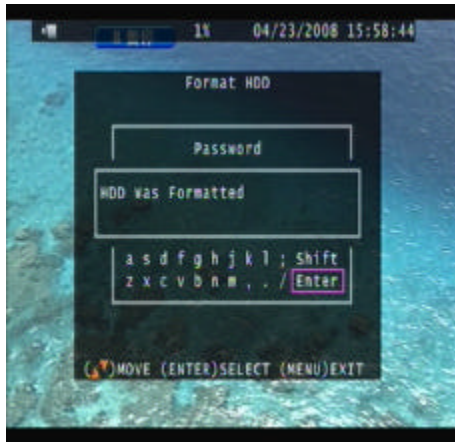
Main Menu – System Set – Format HDD



Main Menu – System Set – Hard Disk Setup – Format HDD – Password



HDD was formatted successfully.



- The correct password needs to be entered before formatting the hard disk. The password is the same as the default unlock password, which is 111111.
- Please set HDD to Master if only one is installed. Second HDD, if used, should be set to Slave.
- After installing slave HDD, format before recording.

Main Menu – System Set – Security Protection - Password Change



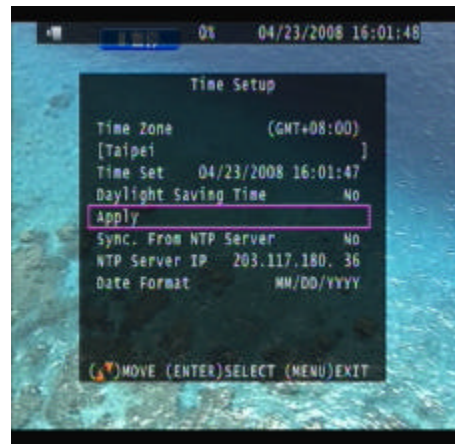
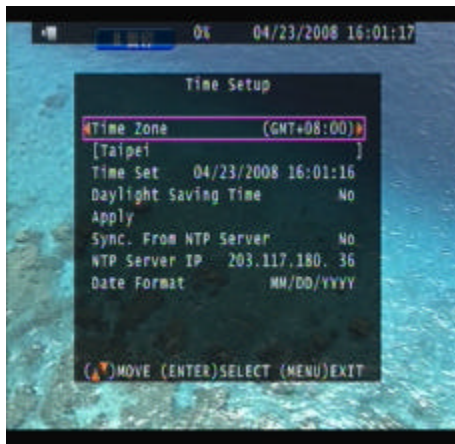
Menu Protection:

On / Off. If set to “on”, you need to enter your password to access the menu.

Auto Key Lock:

After 1 ~ 120 seconds the system automatically goes into key lock mode. You will have to “unlock” before operating the DVR.

Main Menu – System Set – Time Set



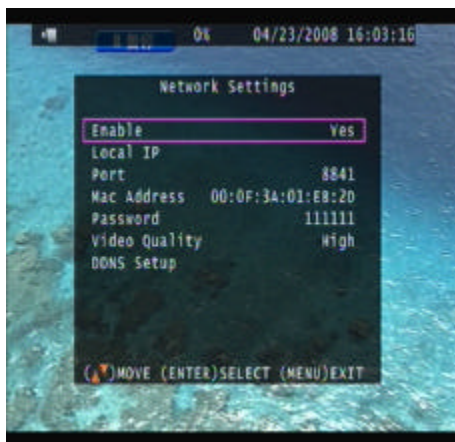
Select your time zone and auto time synchronization with an NTP server. An internet connection is required for the NTP server. The NTP server does not work under network DHCP mode. After time set or daylight mode turns to on, you need to apply and confirm. 0 ~ 9 is repeatable with increase + button, and decrease - button.

If the DVR is connected to a network system, enable **NTP server** to get a network request automatically.

Main Menu – System Set – Dwell Time Setup (Channel auto sequence)

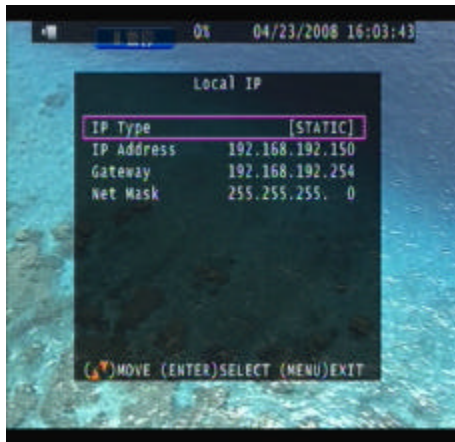


Main Menu – System Set – Network Settings Network Settings – Local IP



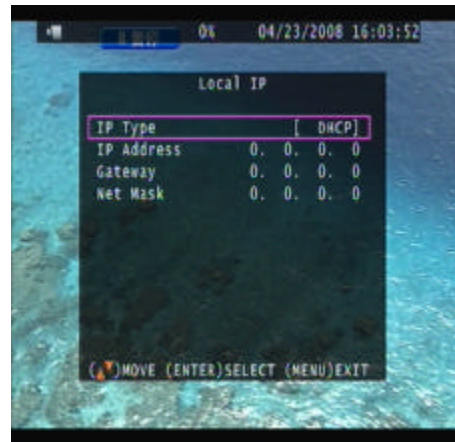
Network Settings – Local IP – STATIC

Select static IP address / Gateway / Net Mask

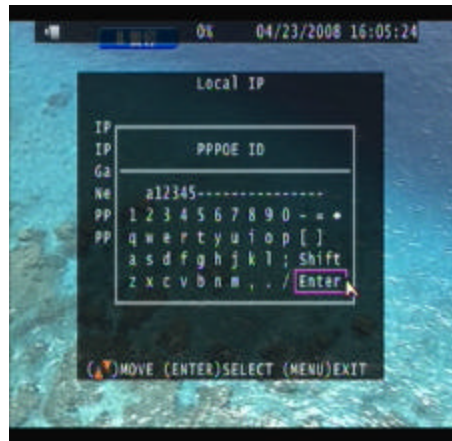
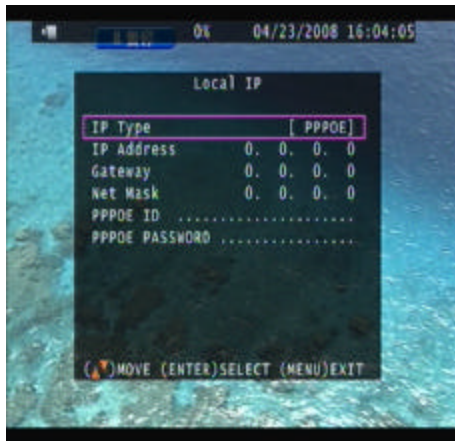


Network Settings – Local IP – DHCP

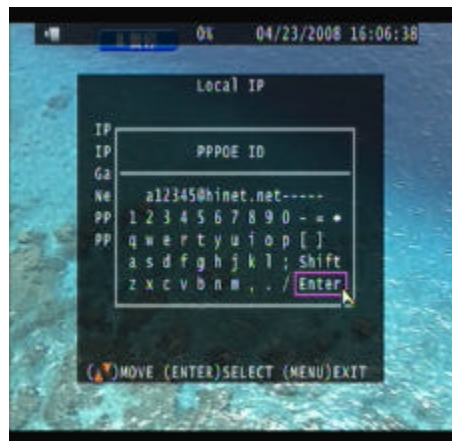
Auto IP detected under IP sharing or router



Main Menu – System Set – Network – PPPOE

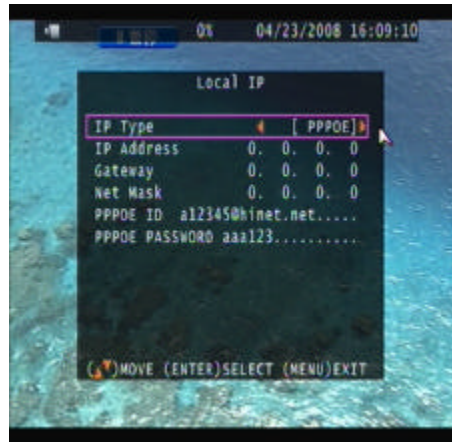
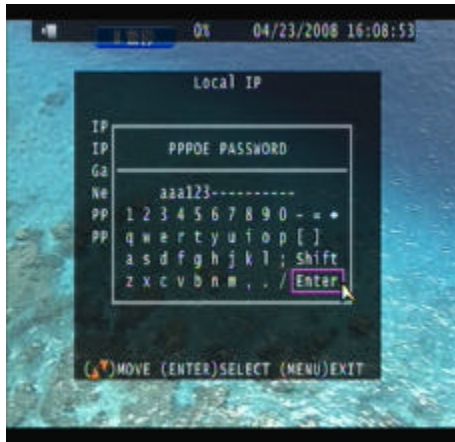


Main Menu – System Set – Network – PPPOE ID



If the DVR is connected to the internet, enable **Main Menu – System Set – Time Set NTP server** to get a network time request automatically.

Main Menu – System Set – Network – PPPOE – Password



Input PPPoE account and password, then save & exit menu.

IP will not correctly appear on screen if your firewall or router settings block communications with your DVR.

Type the IP into Net viewer or IE browser to view image via network.

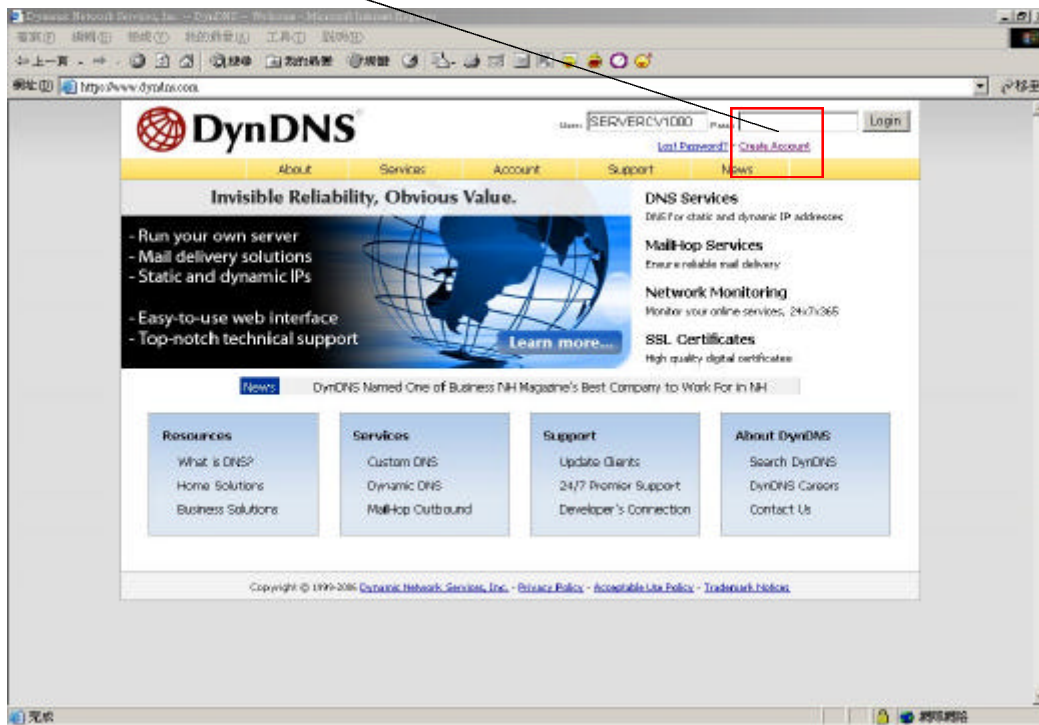
Main Menu – System Set – Network – DDNS set



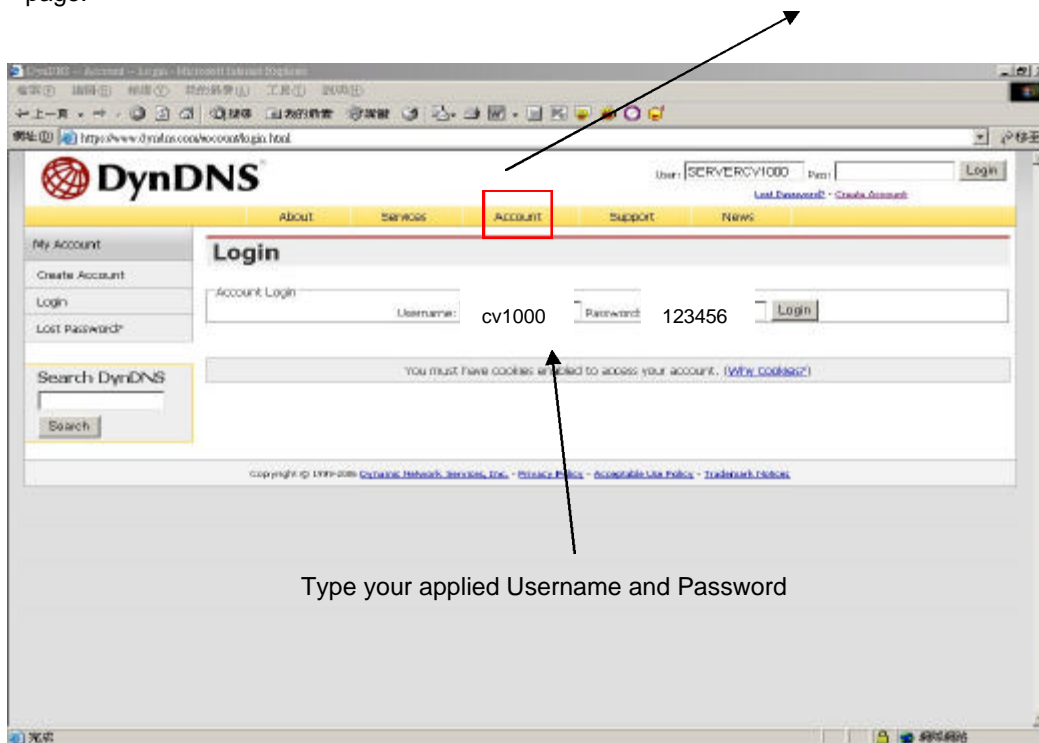
A Static IP Address (IP address does not change) from your internet service provider is the best solution to connect your DVR to the internet. If a static IP is not easily available to you, a “DNS” service is an acceptable alternative.

Ex: Enter in www.dyndns.com to apply for a free account and host name.

Click Create Account to make a new ID name.

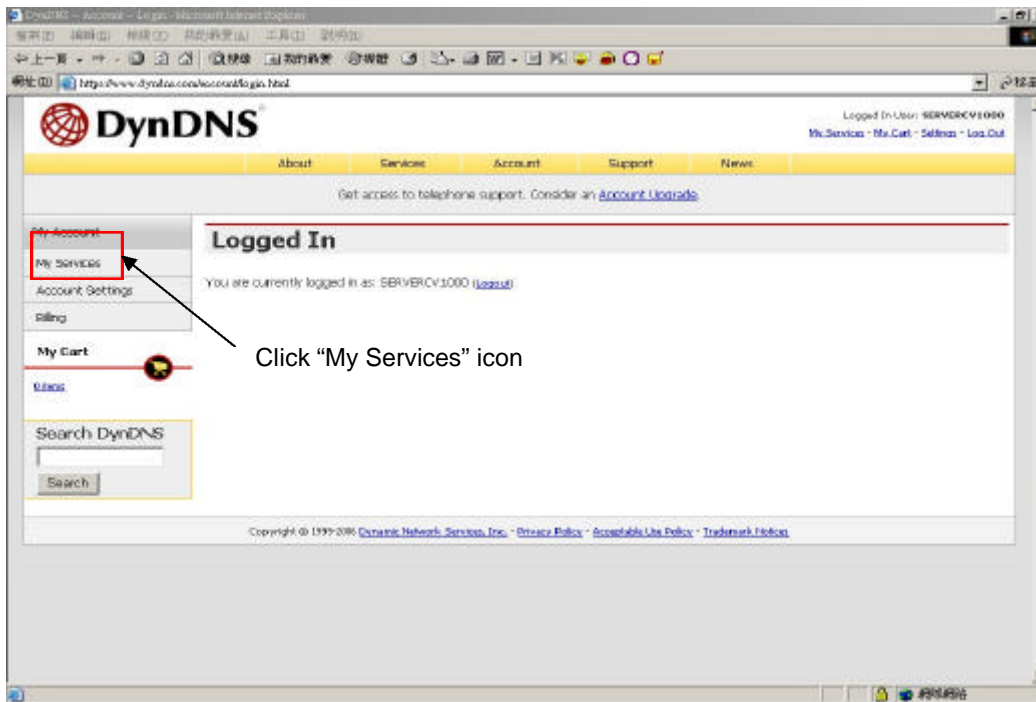


Fill in all the personal information, password, and email requested. Please go to your email account to activate your new account. Return to the DynDNS website; click Account to log in page.

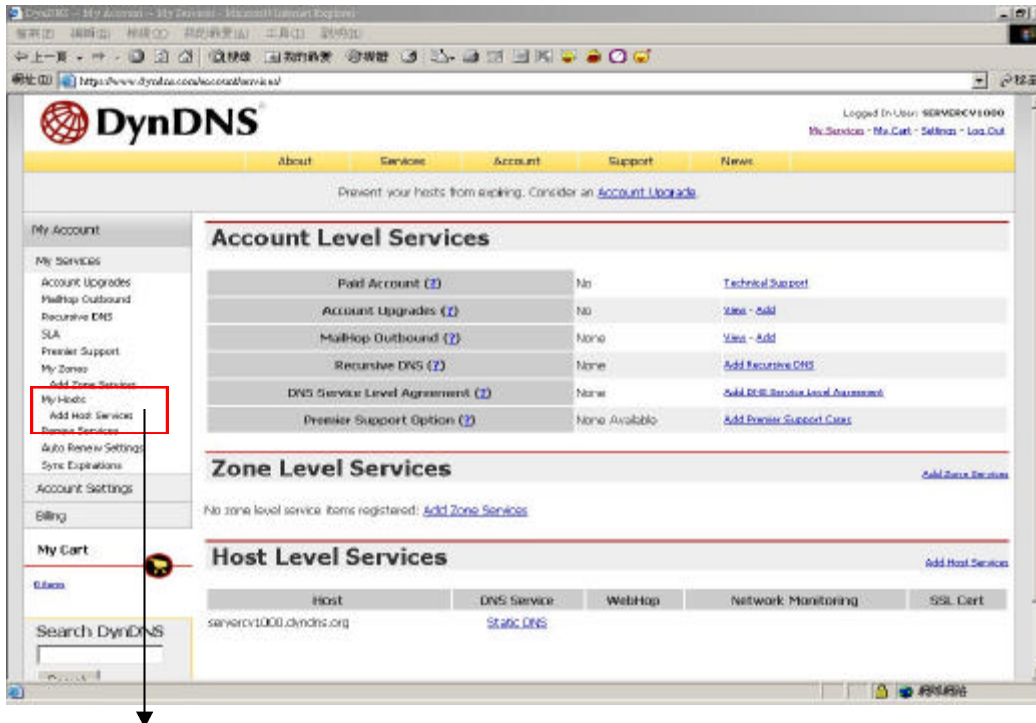


Type your applied Username and Password

Login page



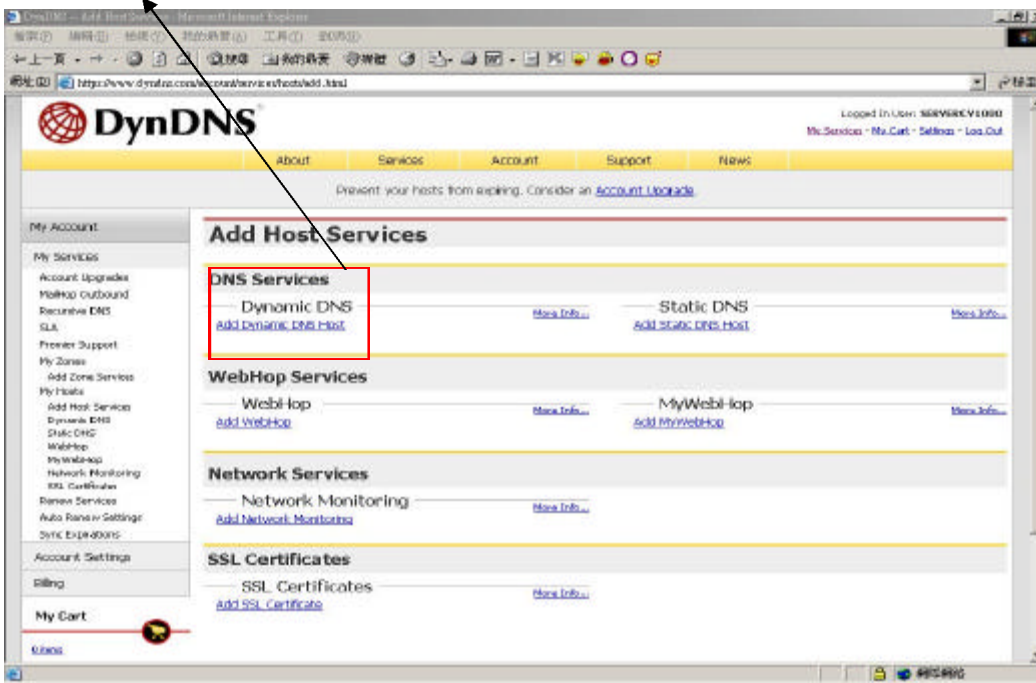
Click Add Host Services:



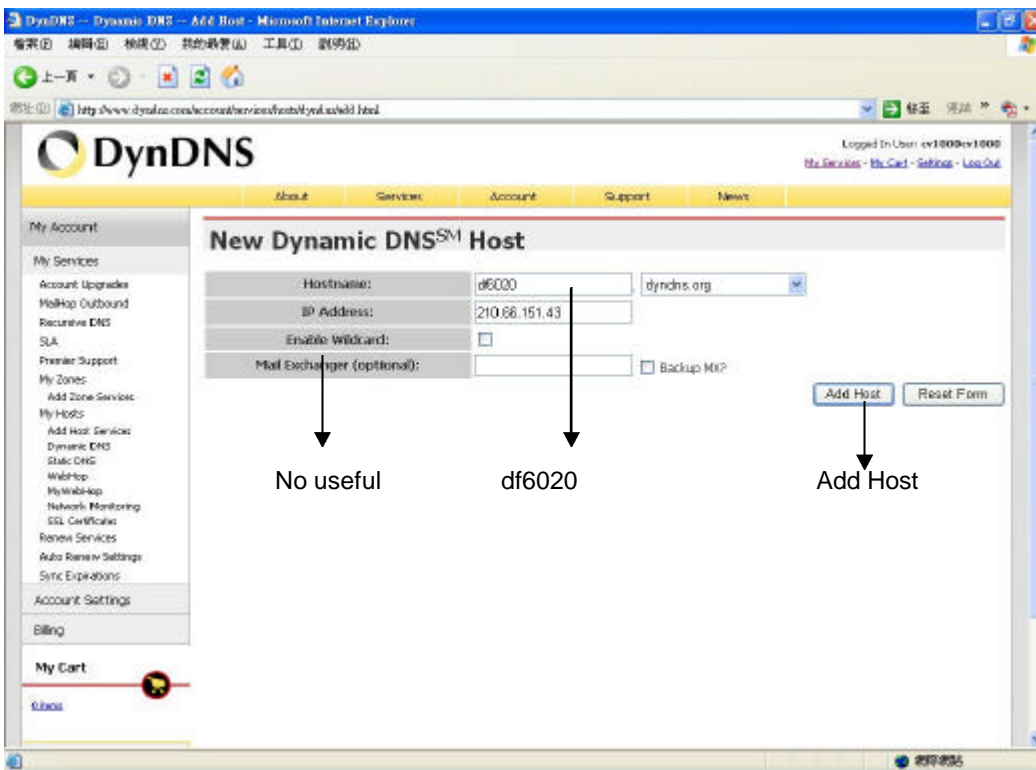
Click "Add Host Service"

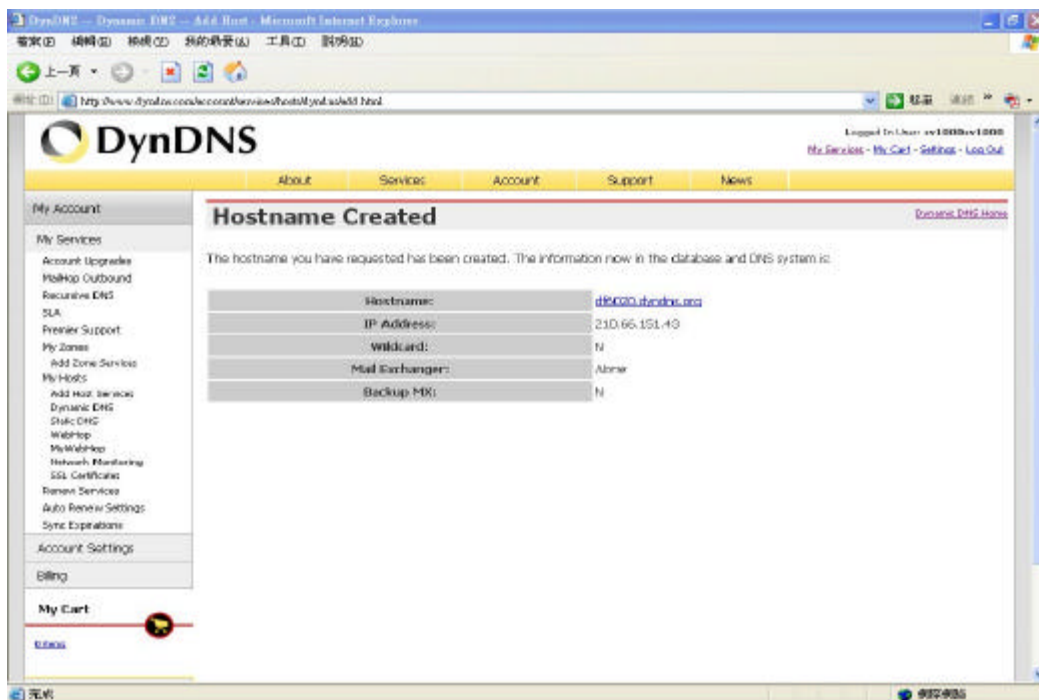
Add static DNS Host:

Select Static DNS: add Static DNS Host



Type a Hostname user decided.





Enable : YES

DNS Server: From ISP

DDNS Server: DynDNS.

HOST Name: Insert host name

User Name: Insert DynDNS username

Password: Insert DynDNS password

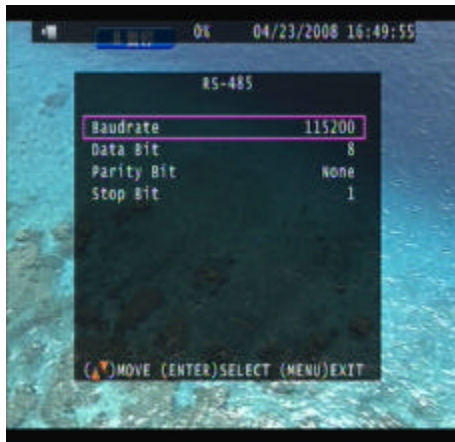
On IE browser blank bar, type your hostname to get on line.

DNS address is required. (Please ask your local ISP). DNS only works under DDNS mode.

Network stream speed depends on the locality bandwidth.

A download speed of 512K (minimum) is required to avoid image degradation.

Main Menu – System Set – RS-485

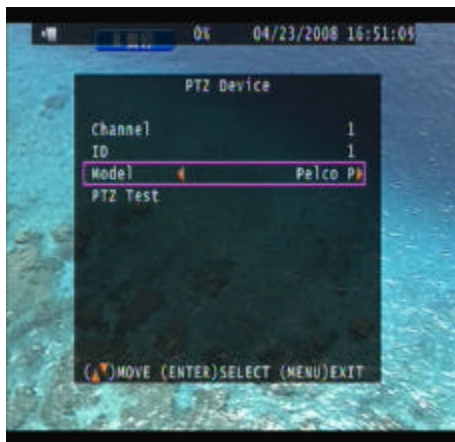


Common Settings



RS485 Settings in your DVR need to match the settings of your PTZ Camera.

Main Menu – System Set – Pan/Tilt Device



Control: Keypad, mouse

* Mouse control: press ESC to enter PTZ mode, press AUTO button, then click the left button of the mouse to control PTZ movement.

Preset PTZ Positions

Your new dual codec DVR will program (set) and control (call) up to four preset positions with a programmable PTZ camera such as the Security Labs SLC-171C or Piczel 3505.

While in the PTZ mode:

To enter (SET) preset positions: Press the <QUAD / SET> button, adjust the PTZ camera to the desired view and press <1>, adjust the PTZ camera to the next desired view and press <2>, adjust the PTZ camera to the next desired view and press <3>, finally adjust the PTZ camera to the next desired view and press <4>.

To view (CALL) preset positions: Press the <AUDIO / CALL> button, then press <1>, <2>, <3>,

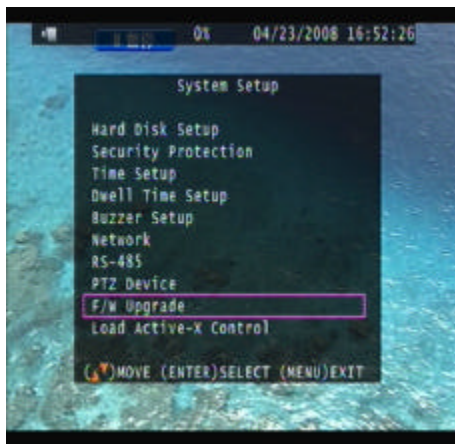
or <4> to instantly move the PTZ camera to the previously programmed position.

Programmed positions can also be set and called with the Network Viewer program on the included software CD.

Main Menu – System Set – F/W Upgrade

Should a firmware upgrade become available for your DVR, you can install it via the USB (flash drive) port on the front of your unit. Transfer the available upgrade file (.FWI) that you have received via e-mail or from downloading from our web site onto a USB flash drive.

Place your unit in the <STOP> mode, connect the USB flash drive, and follow the prompts on the F/W Upgrade Menu.



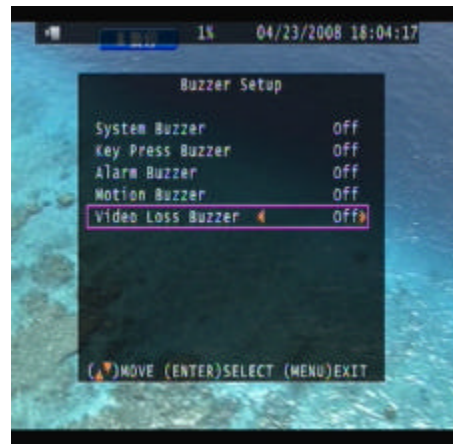
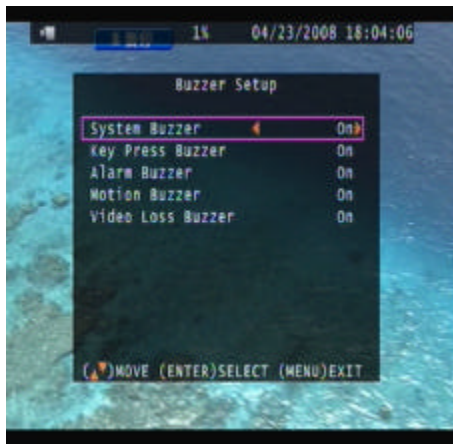
Press PLAY to start version update.



DVR automatically reboots after version is updated.

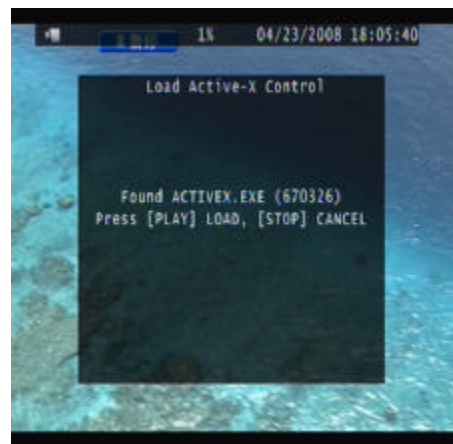


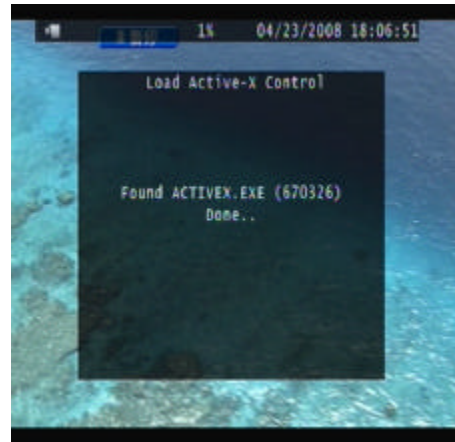
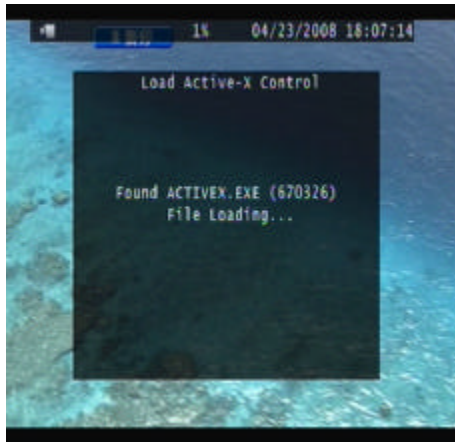
Main Menu – System Set – BUZZER SETUP



Main Menu – System Set – Load Active-X Control

Stop the hard disk before loading the Active-X control for use with a web browser.



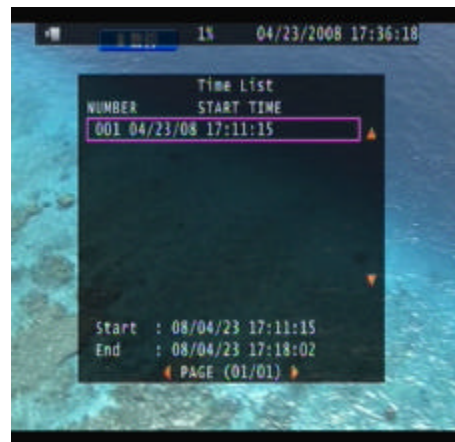


1. Before making a connection using internet explorer, please download the ActiveX to the DVR hard disk from the CD-ROM.
Steps: CD disk → ActiveX → USB flash drive → DVR (with hard disk) USB → Menu - System Set – Load Active-X Control → ENTER button
2. Also install ActiveX to your personal computer. Net viewer is packaged with ActiveX.exe.
3. Router configuration may be needed to view the DVR from a remote computer, (see page 45 for explanation)

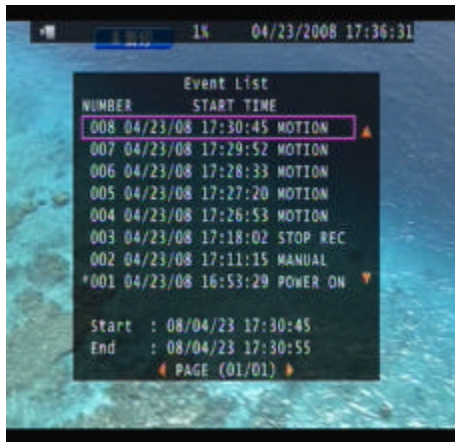
Main Menu – Search



Main Menu – Search – TIME List



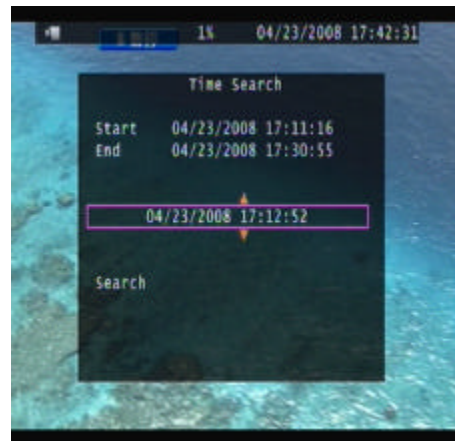
Main Menu – Search – Event List



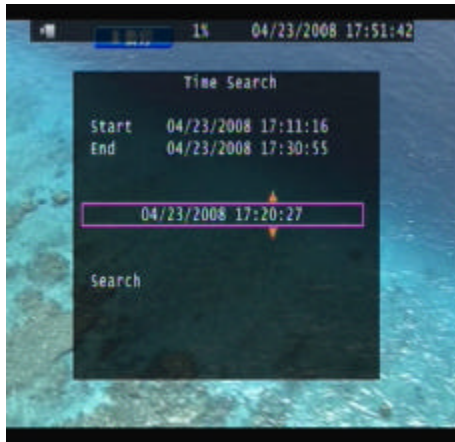
Main Menu – Search – Time Search

Press ENTER to select data and time. Move cursor left and right to select item.

ENTER or + / - button to change value.



Main Menu – Search – Time Search: After data and time are selected, go to Search and then press ENTER to start playback.



Playing



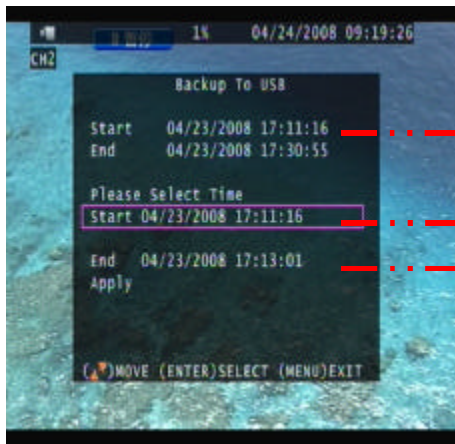
Forward speed: $x 2 / x 3 / x 4$ (Direction right button)

Reverse speed: $x 8 / x 16 / x 32$ (Direction left button)

Press STOP to search list, press ESC to enter live mode.

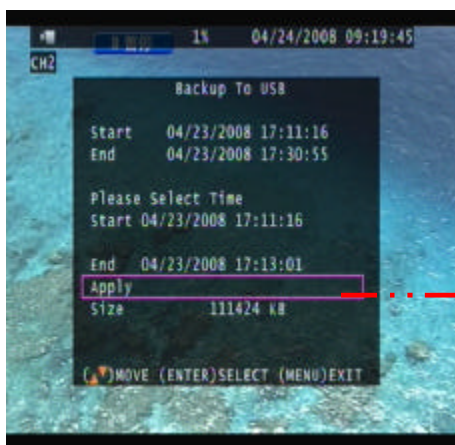
Backup mode: A USB thumb drive is required for backup. Back up file size cannot exceed 1GB. When system reads USB (thumb driver only) device, the system will stop recording for about 2 seconds

Mode 1: On live mode, press backup button to access backup page.



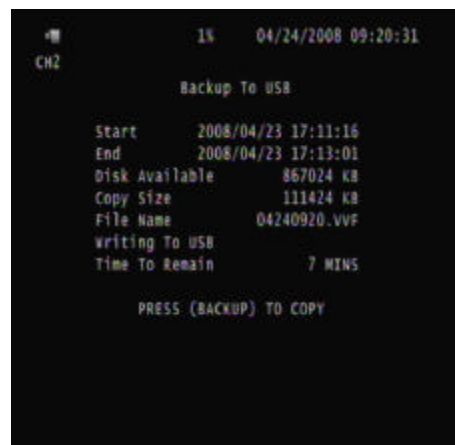
Total hard disk data time range

Select start and end time of backup

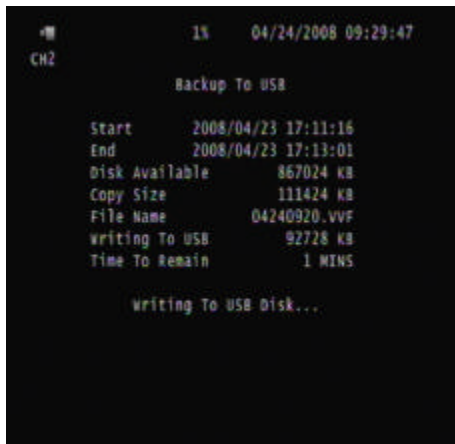


After selecting backup time, select apply to display data size. After size appears, press backup button to access USB page.

DVR is reading thumb drive



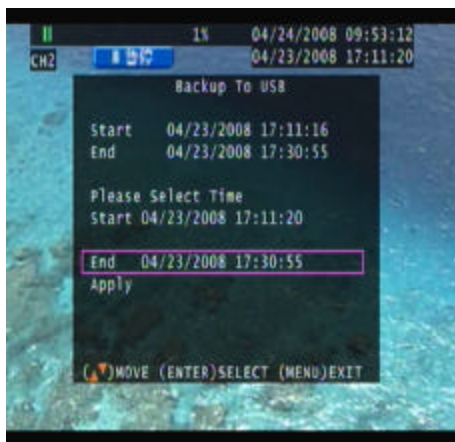
After a while, all backup information displays on screen. You can press backup button to start the file backup. Data is writing to USB thumb drive, please wait until backup is complete before removing drive, or damage will occur to your unit. Press menu button to quit USB page.



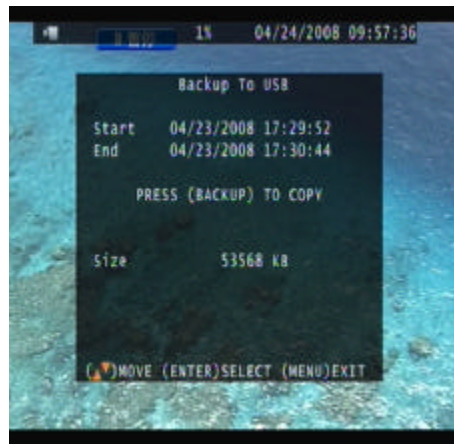
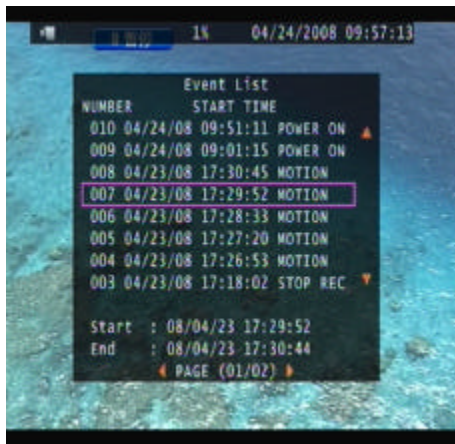
Mode 2: Press play button to start playback. The playback beginning time is the last event recorded. Press + and – to select backup time. You can only increase seconds in this backup mode. Press backup button to return to the USB page (which is the same as Mode 1).



Mode 3: Access events with the T-SRH button. Adjust end date and time.



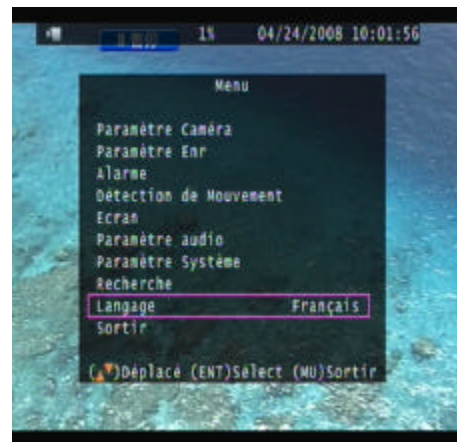
Mode 4: On event list, choose an event recording, and press the backup button. The USB page will then be displayed. Press the backup button.



USB compatible brands (Max. 4G)

ADATA / Transcend / San Disk / Kingston

Main Menu – Language – English or other

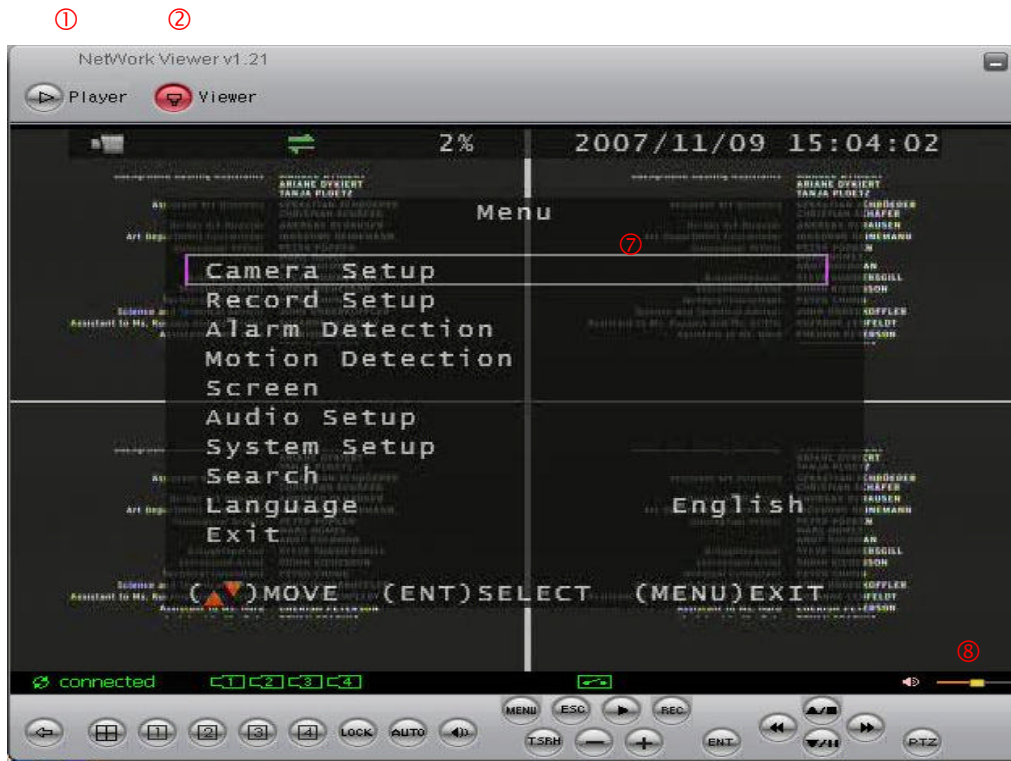


Main Menu – Exit



Save changes if any function value has changed, then exit the menu.

Net viewer



Viewer function:

1. Backup file player
2. Network viewer
3. Connection

DVR control via viewer:*

4. DVR screen: Quad, Camera 1 ~ 4 full screen / Key lock / Channel auto sequence.
(Video stream speed is faster with audio off)
5. DVR function: MENU / ESC / Play / REC / T-SRH / - value change / + value change
6. DVR direction button: Up (Item select, Play Stop) / Down (Item select, Play Pause)
Left (Item select, Play Reverse) / Right (Item select, Play Forward)
SEL (ENTER): Item confirm/select, value change
7. DVR menu pop-up
8. Audio volume (PC site)

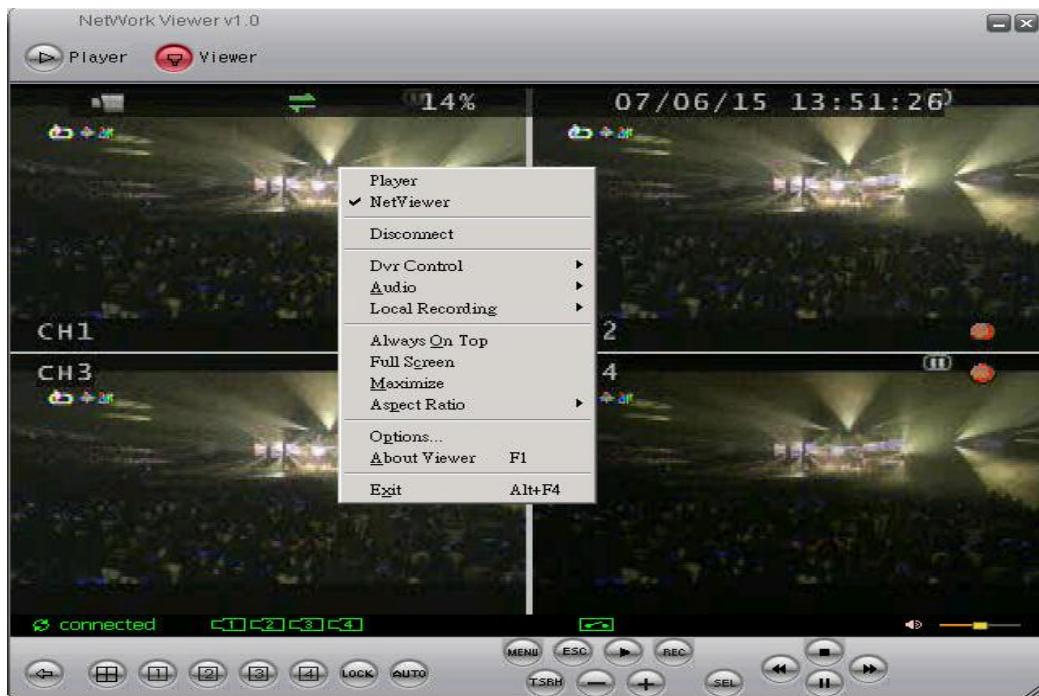
*Viewer control panel button is same as DVR keypad.

*Viewer and DVR display simultaneously.

*PTZ control is supported on viewer and control is same as the DVR keypad.

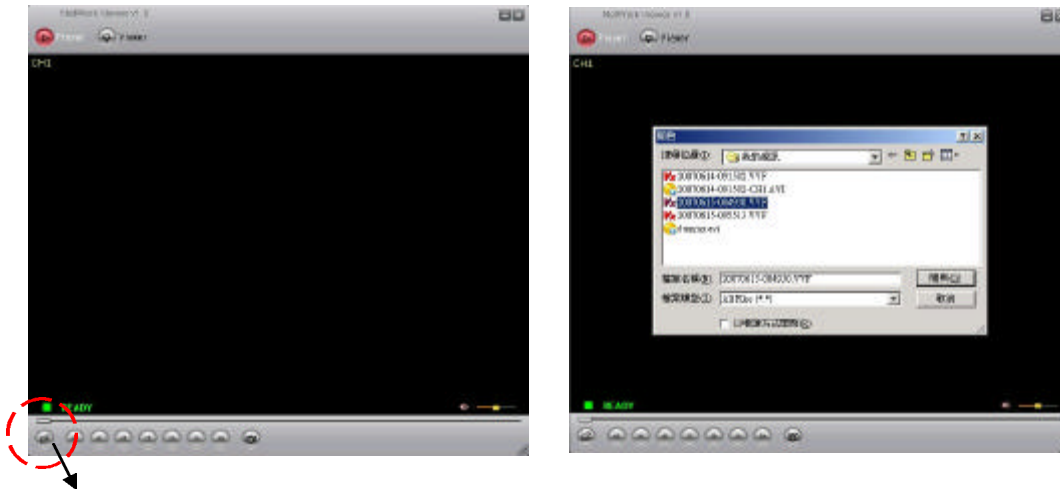
*PTZ control and movement speed depends on network streaming.

Viewer menus & controls:



Player	Switch to backup file play mode
Netviewer	Switch to DVR network viewer
Disconnect	Network log out and connect canceled
DVR Control	DVR function control
Audio	Volume adjust (PC site)
Local Recording	View image recording
Always On Top	Player or viewer always on top even when other data folders are open
Full Screen	Viewer change to full screen
Maximize	Full screen display
Aspect Ratio	Resolution 640 x 448 / 640 x 544 adjust
Options	Viewer function setup
	Always on Top: Player or viewer always on top even when other data folders are open
	Auto Reconnection: Reconnection if network is disconnected.
About Viewer	Viewer version
Exit	Close viewer

File Player:



Click browser to open file saved



Player button

Open \ Fast Reverse \ Play Reverse \ Previous Frame \ Pause \ Next Frame \ Play
Fast Forward \ Still Capture

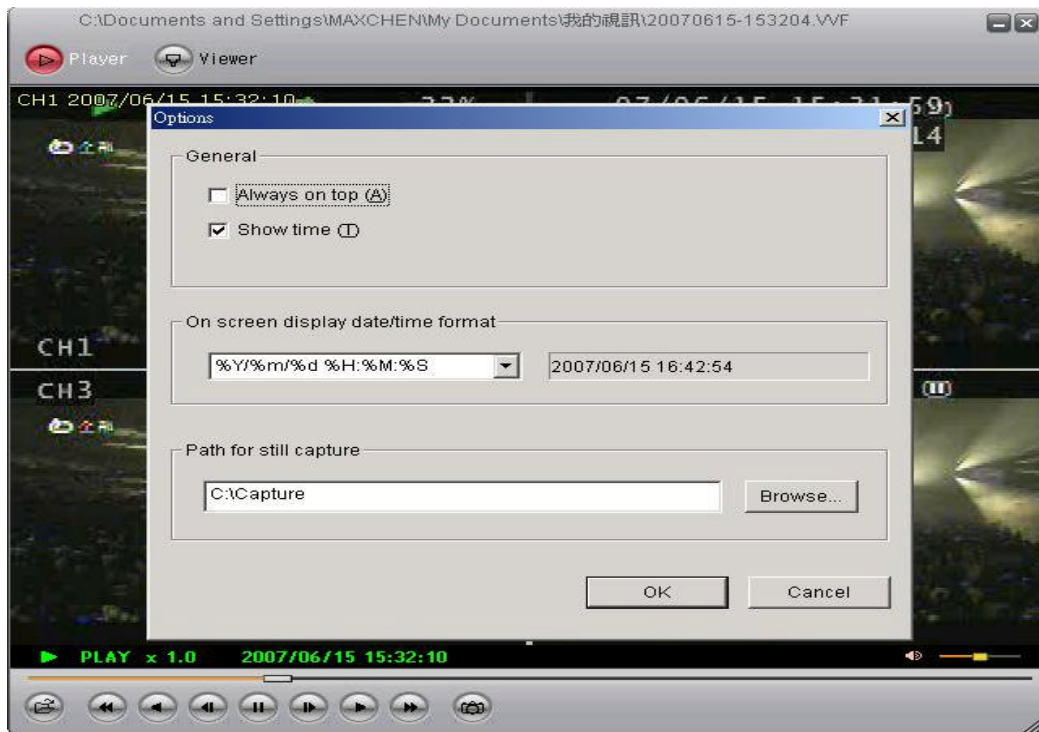
1. DVR USB or net viewer backup file (*.VVF) can only be read in player
2. Local recorded file only read in player, except transfer to AVI.
3. Backup file includes video and audio

Player:



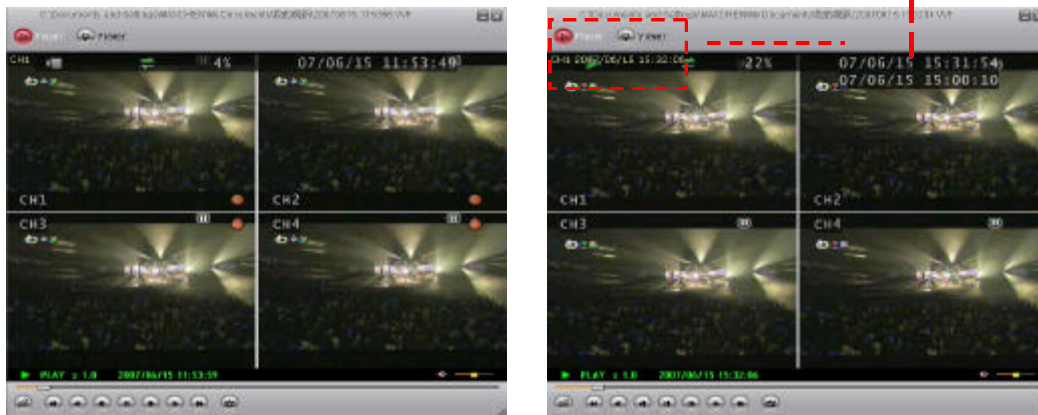
Player	Switch to backup file play mode
Netviewer	Switch to DVR network viewer
Open File	Open the backup file
Open Disk	Open the DVR hard disk, which is installed to PC IDE slot
Export	Backup file to AVI files transform (Video + Audio). See AVI page
Close	Player Button control disable
Show time	Show the backup beginning time
Always on Top	Player always on top even when other data folders are opened
Playback	Play back mode and speed select. Same as Player button
Audio	Audio volume adjust (PC site)
Full screen	Player screen to full size
Maximize	Player to full of screen
Aspect Ratio	Player resolution adjust
Options	See Next page
About viewer	Version of viewer
Exit	Player and viewer exit

Options



Always on top: Player always on top even when other data folders are opened

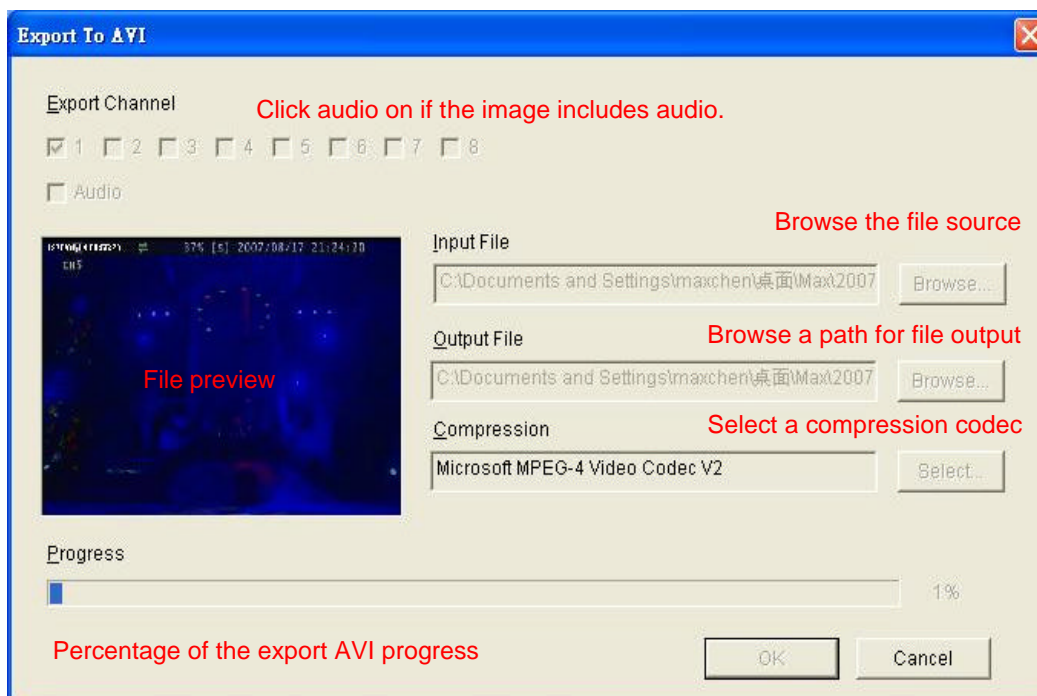
Show time: Shows the PC time when user started recording the backup file ←



On Screen display date/time (Show time) format: Please select the date format you want to use.

%Y/%M/%d %H:%M:%S:	2007/06/15 15:32:29
%y/%M/%d %H:%M:%S:	07/06/15 15:32:29
%Y/%M/%d %p %H:%M:%S:	2007/06/15 PM 03:32:29
%M/%Y/%d %p %H:%M:%S:	06/07/15 PM 03:32:29
%M %d %H:%M:%S %Y:	JUN 15 15:32:29 2007
%M %d %p %H:%M:%S %Y:	JUN 15 PM 03:32:29 2007

VVF file export to AVI



Please wait until file export is completed before closing window.

PTZ Control mode



Channel / Direction

Near / Far, Call OSD,
Menu confirm

Select camera channel

Set presets

Zoom -- / + : Lens, Near / Far

Menu: Call PTZ OSD

Enter: OSD value & confirm

Channel: Select PTZ channel

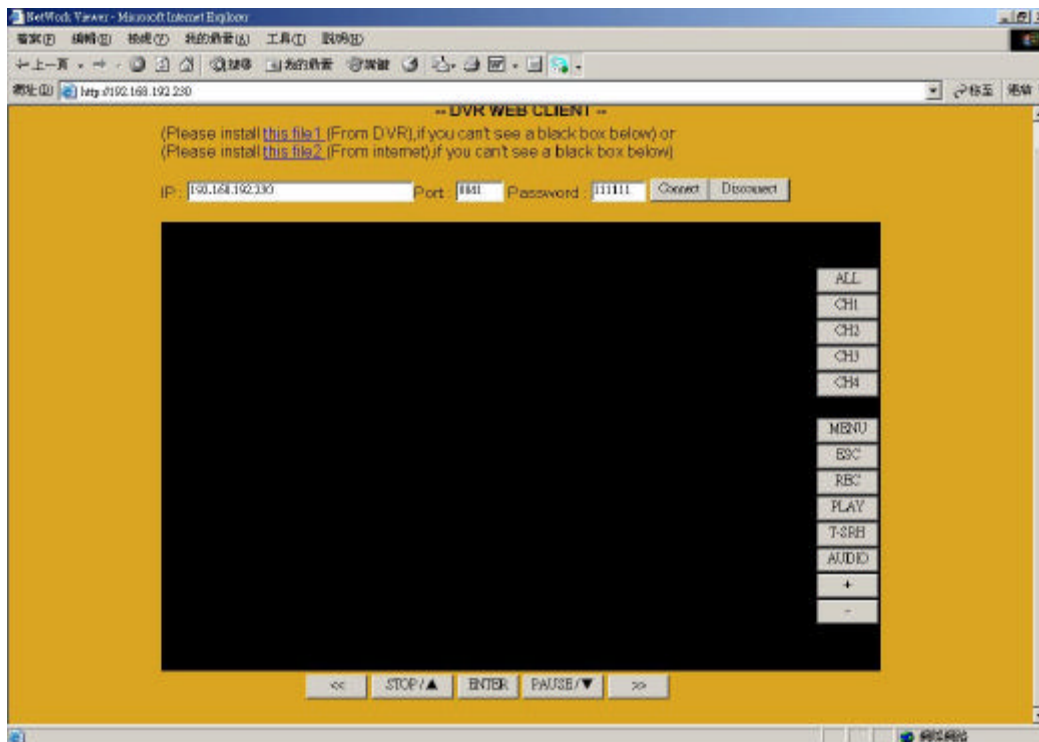
Preset: Preset setup

Select preset 1 ~ 4, and then click SET to save. Click CALL to run preset.

Click AUTO to start all presets. Click STOP to terminate.

CLEAR, delete preset 1 ~ 4

IE browser:



IE control button is the same as the DVR keypad.

1. Before making the DVR IE connection, please download the ActiveX to the DVR hard disk from the CD-ROM, and then you can view the DVR image via internet from any windows XP PC.

Steps: CD disk → ActiveX → USB thumb drive → DVR (with hard disk) USB →
Menu - System Set – Load Active-X Control → ENTER button

Also install ActiveX to your personal computer. Net viewer is packaged with ActiveX.exe.

Connecting to the WAN

Router Set-up Basics

General information:

Your router is the traffic cop of your network. It permits or blocks in-going and out-going traffic on your network. Your router will issue an IP ADDRESS to your computer, DVR, or what ever you have connected to your local network. The router uses this address to forward an access request to the devices on your local network from the WAN (Internet). In order for this to work, you must configure your router security settings (See explanation below).

Set up your DVR / Camera on the LAN first. Check to confirm that it is working properly.

Access your Router's set-up page.

Type the IP address of your Router into the Address Bar of your Browser.

Login

Port Forwarding

Enter the name of the Device

Protocol = TCP/IP

Port Range (usually 80 to 80 unless your LAN computer is using that port for something else).

Enter IP address of the DVR / Camera

Select "Enable"

Save changes & exit Router page.

Or

DMZ:

Enable DMZ function

Enter IP address of the DVR / Camera

Save changes & exit router page

Identify your WAN (wide area/internet) address from your LAN (local area network):

Go a WEB that will identify your WAN or internet IP address. There are many sites on the world wide web that can do this. Try <http://whatismyipaddress.com/> or <http://whatsmyip.org/>. and your WAN address will be displayed. If you use a router to access the internet, the IP that

is displayed is the WAN address of your router. The WAN address should also be available in your router setup & configuration page.

If you have a STATIC IP address from your internet service provider, your IP remains the same every time you use the internet. If you have the more common DYNMAIC IP address, your IP will change from time to time.

You will enter this WAN IP address from a remote computer to access your DVR / Camera (browser address bar).

Specifications

Model	4 CH DVR
Input	4 CH Inputs 1.0Vp-p, 75ohm unbalanced (BNC Type)
Output	Main monitor composite (BNC type) x 1
Horizontal Resolution	640x448 (NTSC) / 640x544 (PAL)
S/N Ratio	More than 40dB
Color	6.7 Million

Monitoring Method

Channel Display	Single / Quad channel
Sequence Display	Available
Screen Quality	640(H)x 448(V) Active Pixels(NTSC); 640(H) x 544(V) Active Pixels (PAL)
Display Rate	120 fps (NTSC) / 100 fps (PAL)

Recording/ Play Function

Recording (Max) NTSC	Max 60 fps(NTSC); Max 50 fps(PAL)
Recording Resolution	640x224(NTSC); 640x272(PAL)
Record Quality	High, Normal, Low
Compressed Picture	Storage: MJPEG, network / internet: MPEG4
Recording Control	Auto / manual / schedule / motion / alarm
Playback Mode	Time list / event list / Date & Time search

Other Function

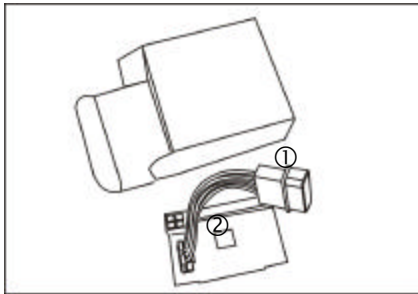
Operation Mode	Record / Play / Network
Motion Detect	Variable rectangle coverage area control
Alarm	Alarm in x 4 / Relay out x 1

Back-Up	USB 1.1/2.0 memory and network remote backup
Storage	HDD x2
Audio Input	RCA x 1
Audio Output	RCA x 1
HDD Record Mode	Full stop / overwrite
Remote Backup	Through client application
PTZ Control	PELCO-D, PELCO-P, MERIT LI-LIN
Key Lock	Yes
Dwell Time	Programmable with adjustable dwell time. 0 ~ 999 seconds
Real Time clock (RTC)	Support NTP (Network Time Protocol)
Remote Control	Support PHILIPS RC5, NEC

Network Function

Ethernet	10 /100 Base-T
Web interface	Support licensed software AP
Network Connection	TCP/IP, PPPoE, DHCP, DDNS
Client Application	Display / playback / PTZ / DVR control
Power Supply	DC 12V / 5A
Weight	N.W./G.W. 3.06kg/3.68kg
Dimension	426(W) x 328.5(D) x 65(H) mm
Operating Temperature	41 °F~104 °F (5 °C~+40 °C)
Operating Humidity	Less than 90%

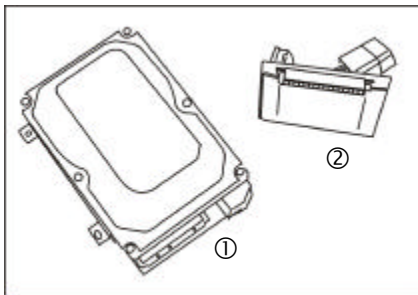
SATA INSTALLATION



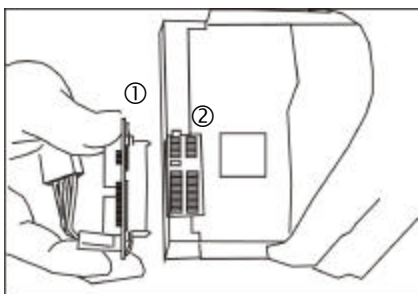
Optional Accessories:

SATA converter board

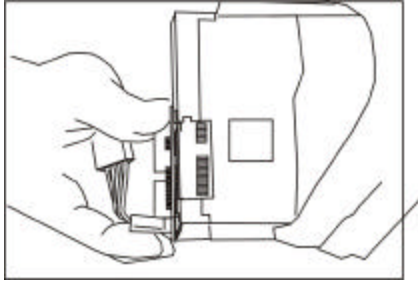
1. Power jack
2. SATA interface port



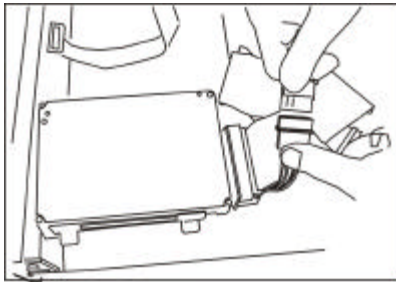
1. SATA type Hard disk
2. SATA converter board



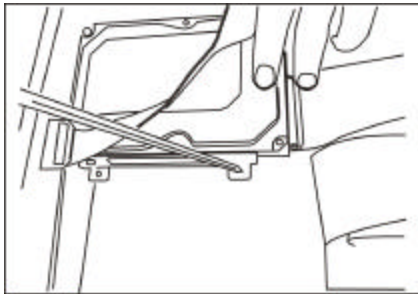
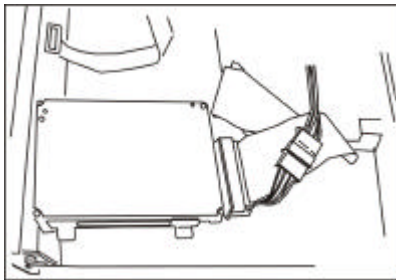
1. SATA converter board to IDE
2. SATA type Hard disk



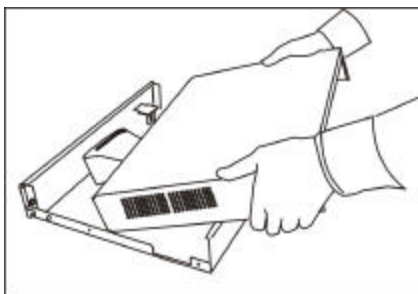
Connect at each end



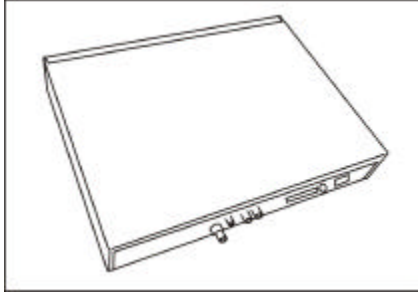
IDE drive may also be connected.



Secure drive(s) with appropriate mounting brackets and screws.



Attach top cover before powering up unit



SATA type Hard disk compatible brands:

Hitachi series 80 ~ 750 GB OK

WD(AAJB) series 80 ~ 750 GB OK